

Abstract of the Disclosure

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HCV variants are described. The variants include polynucleotides comprising non-naturally occurring HCV sequences and HCV variants that have a transfection efficiency and ability to survive subpassage greater than HCV that have wild-type polyprotein coding regions. Expression vectors comprising the above polynucleotides and HCV variants are also described, as are the provision of cells and host cells comprising the expression vectors. Methods for identifying a cell line that is permissive for infection with HCV are also provided, as are vaccines comprising the above polynucleotides in a pharmaceutically acceptable carrier. Additionally, methods for inducing immunoprotection to HCV in a primate are described, as are methods for testing a compound for inhibiting HCV replication.